UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,871	03/07/2002	Martin Kreuzer	TRW(ASG)6058	9986

26294 7590 11/24/2004

TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.
526 SUPERIOR AVENUE, SUITE 1111
CLEVEVLAND, OH 44114

EXAMINER	
RODRIGUEZ, PAMELA	
ART UNIT	**PAPER NUMBER**
3683	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/092,871	KREUZER ET AL.
	Examiner	Art Unit
	Pam Rodriguez	3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,9-13,15 and 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,9-13,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 19, 2004 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by EP document no. 05238394 to Yamada.

Regarding Claim 1, Yamada discloses an assembly (see Figure 1) comprising a steering wheel 2 and a vibration damping device 7 having all the features of the instant invention including: a damping means 17/18 arranged in the steering wheel 2 (see Figure 1), an attenuation mass 8 mounted for vibration movement in the steering wheel

(see the abstract), and an electrical control unit coupled with the damping means 17/18 to actuate the damping means (see the abstract, in particular the phrase which discusses the ON and OFF energization of the electromagnets 17 and 18), wherein the control unit is able to, after actuation of the damping means 17/18, further control the damping means to alter mechanical vibration characteristics of the device such that different vibration frequencies can be damped (see the abstract, in particular the last line).

Regarding Claim 2, Yamada discloses that the damping means 17/18 is designed such that the mechanical vibration characteristics of the device can be altered by supplying electrical energy to the damping means 17/18 (see the abstract).

Regarding Claim 4, note how magnets 17 and 18 (the damping means) are comprised of a material (i.e., a magnetic material) which alters mechanical characteristics with the supply of electrical energy (i.e., magnetized or non-magnetized).

Regarding Claim 12, note how magnets 17 and 18 are readable as hollow bodies and to some extent have a degree of elasticity to them.

Regarding Claim 13, see Figure 1.

4. Claims 9, 10, and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by DE 20105733.

Regarding Claim 9, DE '733 discloses an assembly (see Figure 3) comprising a steering wheel 100 and a vibration damping device 10' having all the features of the instant invention including: a damping means including a hollow damping body 16 arranged in the steering wheel 100 (see Figure 3), a mass core 110 acting as an

attenuation mass arranged inside the hollow damping body 16 (see Figure 3), and an electrical control unit coupled with the damping means, wherein the electrical control unit is able to alter mechanical vibration characteristics of the device such that different vibration frequencies can be damped (see the abstract of the corresponding PG Pub application 2002/0140212).

Regarding Claim 10, see figure 3, wherein the cross-hatching for element 16 seems to indicate it being made of an elastic material.

Regarding Claim 11, see Figure 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3, 6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP document no. 05238394 to Yamada in view of RD document no. 333099.

Regarding Claim 3, Yamada discloses most all the features of the instant invention as applied above, except for a sensor through which the control unit receives data regarding vibrations of the steering wheel.

The RD '099 document is relied upon merely for its teachings of a steering assembly damper having a control unit 4 wherein a sensor (i.e., the Vehicular speed and Rate and Degree of Turn sensors shown in the figure) is provided, through which the control unit receives data regarding vibrations of the steering wheel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the damper assembly of Yamada to include a sensor as taught by the RD '099 document as an additional means of regulating the damping. Providing a sensor would enable better overall control of the damping factoring in other conditions of the vehicle at the time damping is needed. (Also, note that EP document no. 1162124 also discloses such a sensor 56).

Regarding Claims 6 and 15, Yamada does not disclose that the material in which the damping means is comprised of is an electrorheological fluid.

Again, the RD '099 document is relied upon for its teachings of a steering assembly damper which utilizes an electrorheological fluid damping means to control vibrations of a steering wheel (see the abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the damper assembly of Yamada to include an

electrorheological fluid damping means as taught by the RD '099 document as an alternate means of controlling the damping in the steering wheel. Substituting the electromagnets of Yamada with the electrorheological fluid damping means of the RD '099 document would merely be an alternate equivalent means of performing the same damping function.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 20105733 in view of RD document no. 333099.

Regarding Claim 16, DE '733 discloses most all the features of the instant invention as applied in paragraph 4 above with respect to Claim 9.

However, DE '733 does not disclose that the hollow damping body contains one of an electrorheological fluid and a magnetorheological fluid.

The RD '099 document is relied upon for its teachings of a steering assembly damper which utilizes an electrorheological fluid damping means to control vibrations of a steering wheel (see the abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the damper assembly of DE '733 to include an electrorheological fluid damping means as taught by the RD '099 document as an alternate means of controlling the damping in the steering wheel. Substituting the damping means of the DE '733 document with the electrorheological fluid damping means of the RD '099 document would merely be an alternate equivalent means of performing the same damping function.

Response to Arguments

9. Applicant's arguments filed August 19, 2004 have been fully considered but they are not persuasive.

Regarding applicant's arguments with respect to Claim 1, in particular, that the Yamada reference does not disclose that once the damper is actuated, the damper can alter vibration characteristics, the examiner respectfully disagrees.

In the last few lines of the translated abstract of the Yamada reference, it discloses how the electromagnets 17 and 18 are actuated (either ON or OFF) bringing the damper into either an operative or inoperative state. Then the last two lines of the abstract go on to say that once the damper is made operative by this energization, the damper mass 8 is then movable depending upon whether the engine is idling or running. Therefore, this wording seems to suggest that once the damper is actuated, depending upon the condition of the engine, either idling or running, the vibration characteristics of the device can be altered so that different vibration frequencies (those vibrations created by either engine idling or engine running) can be damped.

It is for these reasons that the rejections of Claim 1 and all its dependent claims have been maintained.

Also note, that the rejection of Claim 9 has been maintained as rejected above. And, upon further reconsideration by the examiner, Claim 16 has now been rejected as outlined above.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 703-308-3657. The examiner can normally be reached on Mondays 5 am -3:30 pm and Tuesdays 5 am -11 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pam Rodriguez
Primary Examiner
Art Unit 3683
11/22/04

Pr
11/22/04